

CLASSIFIED MESSAGE

SECRET

DATE 14077 27 SEPT 62

ROUTING	
1	TAES
2	C/DD
3	DDR
4	AD/OSA
5	RB
6	

PRIORITYZEI9I
PRIORITY

TO DIRECTOR

FROM 25X1
ACTION: OSA (1,2,3,4,5,6,7,8,9,10)

INFO: S/C (11)

IN 49995

TOR: 14577 27 SEPT 62

TO

INFO

CITE

25X1

PERSUANT TO OUR DISCUSSION WITH THE DD/R 25 SEPT AND LATE GEARBOX DEVELOPMENTS, PRESENT STATUS APPEARS AS FOLLOWS.

1. ACCESSORY DRIVE SYSTEM; FYI FOLLOWING IS CURRENT HISTORY FROM MEMORY, DATES APPROXIMATE. AFTER RELATIVELY SUCCESSFUL DEVELOPMENT AND ENDURANCE RIG TESTING, FOLLOWING PATTERN EMERGED;

A. REDUCTION BOX SHAFT BEARING FAILED ON XD-3 50 HOUR TEST IN AUGUST. ATTRIBUTED TO IMPROPER INSTALLATION ON STAND.

B. REMOTE BOX INTERNAL BREATHER PIPE LEAKAGE ON XD-3 50 HOUR TEST AUGUST. ATTRIBUTED TO INADEQUATE DESIGN. DESIGN FIX NOW INSTALLED IN NEW BOX ON ARTICLE NR 1.

C. 17 SEPT WEEKLY REPORT CITES REDUCTION BOX INPUT GEAR FAILURE AT 6 HRS ON GEARBOX TEST RIG. [] QUESTIONED BY ME AT THE TIME AS TO SIGNIFICANCE AND EFFECT ON FLIGHT TEST PROGRAM AND TOTAL TIME ON FAILED GEAR. ANSWER WAS "DESIGN TOO LIGHT. REDESIGN IN WORK BUT NOT FLIGHT SAFETY AND NO EFFECT

25X1

SECRET

GROUP 1
Excluded from automatic
downgrading and
declassification

25X1

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ON FLIGHT TEST PROGRAM, FURTHER GEAR HAD OVER 60 HOURS TOTAL
 25X1 TIME. [] ALSO INDICATED NO TIE IN WITH BEARING FAILURE
 PARA A.

D. 24 SEPT WEEKLY REPORT CITED REDUCTION BOX OUTPUT GEAR
 FAILURE AT 6 HRS ON GEARBOX TEST RIG, [] QUESTIONED BY ME
 AS TO "HOW LARGE IS THIS PROBLEM NOW". ANSWER - "LARGE?"
 REPHRASED QUESTION "A PATTERN IS EMERGING, WHAT IS EFFECT
 ON FLIGHT PROGRAM NOW?" ANSWER - "DON'T KNOW YET." REQUESTED
 ADVISE ASAP REGARDING FLIGHT SAFETY.

25X1

25X1 ADVISED BY [] TODAY THAT DECISION MADE TO FLY PRESENT
 CONFIGURATION UP TO 5 HOURS. FEAR OF GOING BEYOND 5 HOURS DUE
 TO ABOVE GEAR FAILURES COUPLED WITH QUESTIONABLE EXPERIENCE
 TO DATE WITH SUNDSTRAND ALTERNATOR DRIVE ON J-75 SIDE. BOTH
 SIDES ARE REDUNDANT SO THAT IF J-58 SIDE ALTERNATOR FAILS DUE
 GEARBOX, J-75 SIDE COULD HANDLE ELECTRICAL LOAD. QUESTIONABILITY
 OF J-75 SIDE DRIVE HOWEVER RENDERS IT NOT SUFFICIENTLY MORE
 25X1 RELIABLE THAN J-58 SIDE. GENERAL OPINION HERE INCLUDING
 [] IS THAT DECISION TO GO FOR 5 HOURS IS GOOD.

2. ENGINE STATUS 26 SEPT 1600 HRS LOCAL:

A. 202 WITH GOOD CONTROL THROUGH STAND OK COMPLETING
 INSTALLATION IN ARTICLE NR 1. WAS TARGETTING GROUND RUNS TODAY
 WITH SOUPED UP HSD CART WEATHER PERMITTING. NOW RAINING HARD
 AND MAY NOT ROLL OUT IF RAIN CONTINUES.

25X1 B. 203 WITH NO CONTROL IN ENGINE SHOP INSTALLING NEW
 AFTERBURNER. CONTROL RETURNED TO [] FOR RECALIBRATION

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AND DUE BACK HOPEFULLY ON 4 OCTOBER. QEC NOT YET AVAILABLE FOR THIS ENGINE.

C. 201 ON TEST STAND WITH ITS OWN CONTROL BUT INCOMPLETE QEC. FOLLOWING STARTS ATTEMPTED TODAY WITH AIRESEARCH BACKUP SYSTEM COMPRISING TWO AIR TURBINES AND TWO TMC-105 CARTS:

1. ENGINE REVVED UP AND LIT WITHIN 40 SECONDS BUT EXPERIENCED EXCESSIVE EGT DUE SEEMINGLY OVERRICH FUEL AIR RATIO. ENGINE SHUT DOWN.

2. ENGINE REVVED UP BUT NO LIGHT SEEMINGLY DUE TO EITHER FAULTY SIGNAL TO OR IMPROPERLY CHARGED CIS. CIS UNIT PURGED AND RECHARGED AS ASSURANCE.

3. NO START DUE BATTERY CIRCUIT TROUBLE WITH ONE TMC-105 CART. CART REPLACED WITH ANOTHER TMC-105.

4. ENGINE REVVED UP WITH APPARENTLY PROPER FUEL AIR RATIO BUT NO LIGHT NOW SEEMINGLY DUE TO LACK OF SIGNAL TO FIRE CIS. INVESTIGATING SYSTEM TO ISOLATE WHETHER TROUBLE IN CIS ITSELF OR IN APPARENT LACK OF SIGNAL. SPARE CIS UNIT AVAILABLE IF REQUIRED.

3. ENGINE CONTROLS; REHASH OF PREVIOUS CONTROL EXPERIENCE HERE POINTS IN ADDITION TO INSTALLATION SENSITIVITY TO SENSITIVITY TO LATE SYSTEM CHANGES SUCH AS INCORPORATION OF HOO HOO VALVE (THRUST DISCONTINUITY FIX) AND MINIMUM FLOW SCHEDULE FOR MARGINAL STARTING. EXPRESSES OPTIMISM AND OFFERS OPINION THAT CONTROL ITSELF IS BASICALLY OK.

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